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Regional Transit Plan  
for Southeast Michigan

*"The Detroit Regional Mass Transit Initiative"*

By the **Regional Transit Coordinating Council**

Updated March 27, 2009

• **mission**  
• **vision**

➤ **Mission:**

- Enhance quality of life and regional economic development through improved regional mobility.

The following table gives the results of the experiments.

## ► Strategies/Objectives:

- **Expand & Upgrade Existing Bus Transit Services**
  - **Introduce NEW rapid transit service/corridors**
  - **Assure regional coverage and connectivity between existing & new rapid transit service.**
  - **Form a Regional Transit Authority**
  - **Identify/Access Funding**

## Enhancement through Coordination

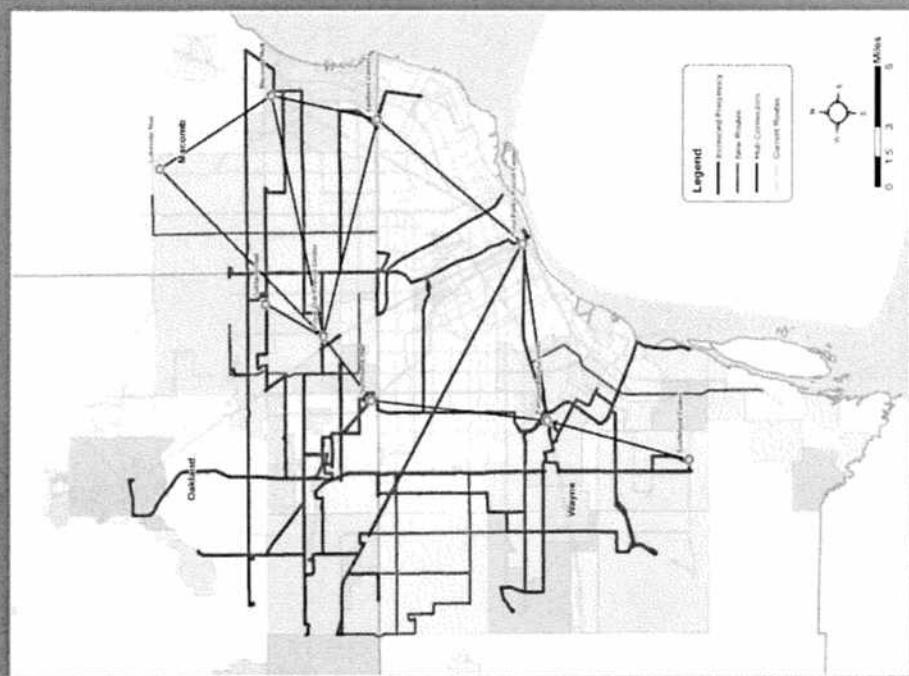
- **Step 1:** Things existing transit agencies can do quickly to improve customer experience
  - Coordinate/integrate Para-transit Services
  - Common Phone Number for transit information
  - Improve schedule integration between SMART and DDOT
  - Common Signage between SMART and DDOT
    - A Regional System Map
    - Improve Communications between fixed route and community transit services

## Proposed Enhancements to Existing Services

### **Step 2:** (*Requires additional funding*)

#### ► Fixed Routes

- New Routes... Comprehensive coverage of three-county region
- Increased Frequency.
- Bus Stop Enhancements (*Shelters*)
- Hub Connectors allow riders to travel quickly between transit hubs



#### ► Community and Para-transit

- Increase by 50%
- Enhance major corridors with Arterial Rapid Transit.....

Proposed Fixed Route Service  
Enhancements with Hub-connectors

## The Arterial Transit Strategy

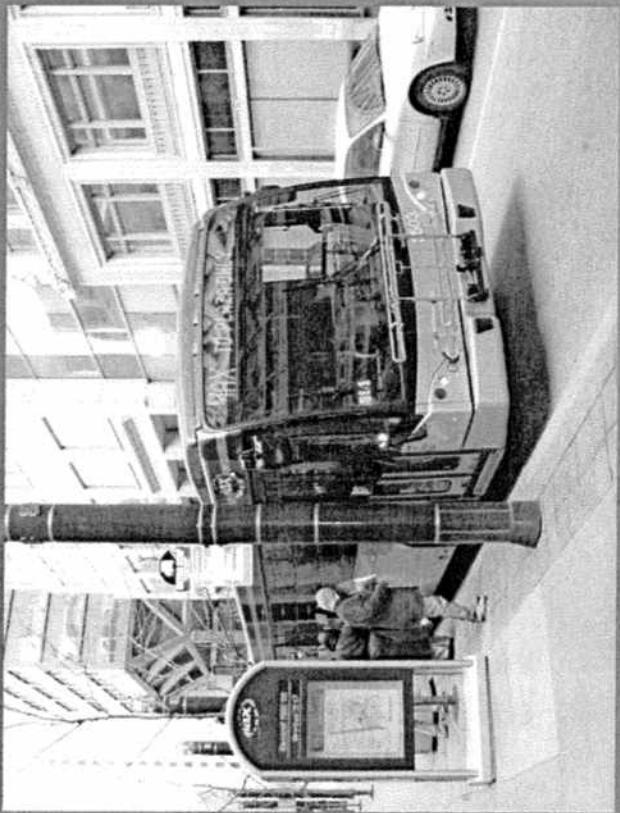
➤ **Arterial Rapid Transit is the key to the network...**

- Provide upgraded mode of transit in a shorter period of time than with BRT or LRT
- Relatively Low cost to implement
- Upgrade to higher level service (*BRT or LRT*) “if and only if” ridership warrants and funding sources are identified.

## Arterial Rapid Transit (ART)

### ► Arterial Rapid Transit (ART) corridors include:

- ADA & eco-friendly, low fuel consumption hybrid buses
- Enhanced stops with shelters that provide more protection
- Traffic signal priority
- Next-bus information
- Specific branding of buses and stops
- Wider stop spacing



Capital Costs: \$300,000-\$450,000 per mile  
Vehicle Costs: \$500,000 - \$600,000 each  
Operating Costs: \$127 per vehicle hour

## Other Rapid Transit Modes

- Bus Rapid Transit (BRT)
- Light Rail Transit (LRT)
- Commuter Rail Transit (CRT)
- Inter-City Rail (ICR)

## BUS Rapid Transit (BRT)

- Buses emulate the reliability and convenience of rail transit.
- Less costly than light rail
- Will promote TOD.
- BRT features:
  - Special Vehicles
  - Reserved Lanes
  - Stations that provide express operations and enhanced passenger facilities



Capital Costs: \$9.1 million - \$21 million per mile

Vehicle Costs: \$1 million - \$1.2 million

Operating Costs: \$135 per vehicle hour

# Light Rail Transit (LRT)

Light Rail Transit (LRT) is an electrically powered rail passenger system used for urban transportation.

- There are two types of LRT:



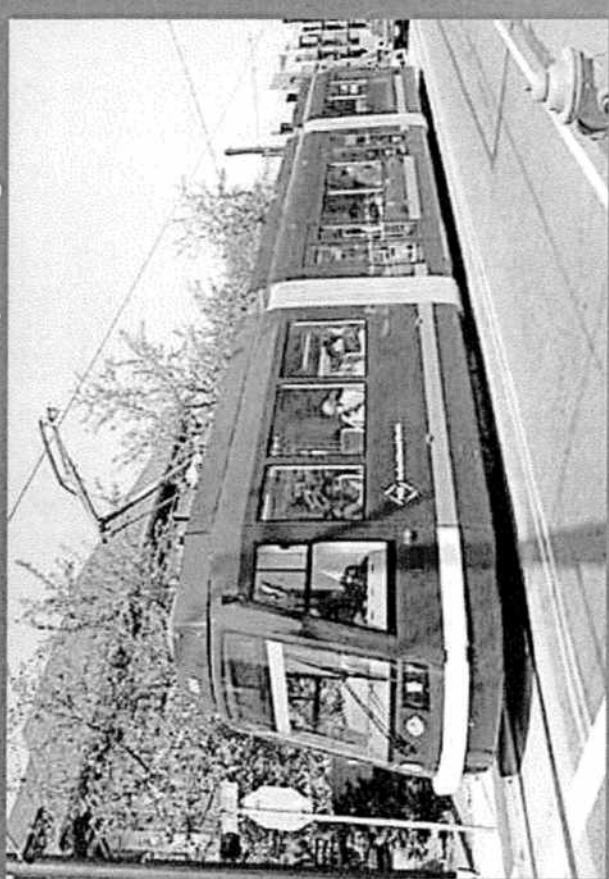
Light rail vehicle



Modern Streetcar

## Light Rail Transit (LRT) – Modern Streetcar

- Designed to travel in urban cores
- Light and maneuverable
- Used in areas where there are many stations
- Fast acceleration minimizes the effect that short station spacing has on travel times



Capital Costs: \$16 million - \$29 million per mile

Vehicle Costs: \$3 - \$3.5 million

Operating Costs: \$173 per vehicle hour

## Light Rail Train (LRT) - Light Rail Vehicles

- Larger trains designed to operate in mixed traffic and on dedicated right of way
- Capable of high speed (55 mph) and being connected to travel in multiple units
- Stations for light rail vehicles are generally spaced a minimum of half mile intervals to allow the vehicles to reach higher speeds



Capital Costs: \$59 million - \$69 million per mile

Vehicle Costs: \$4 million - \$5 million each

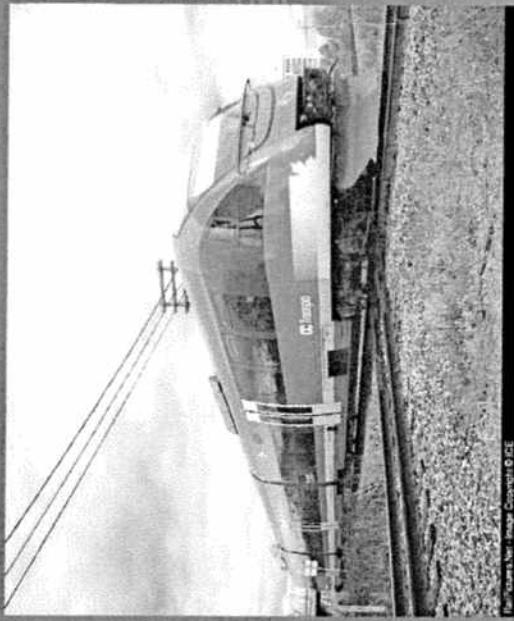
Operating Costs: \$217 per vehicle hour

## **BRT and LRT**

- Both BRT and LRT include full-service stations that will generate **Transit Oriented Development.**

## Commuter Rail

- Rail passenger service, operated on tracks shared with freight traffic
- Typically provides at least several inbound and outbound weekday trains, focused on work trips
- Normally operated with trips spaced through the day.
- TOD a major factor at CRT stations.



Capital Costs: \$1.7 million - \$3.3 million per mile  
Vehicle Costs\*: \$2.5 million - \$3.5 million (Used)  
\$7 million - \$15 million (New)

\*One engine and five passenger cars

Operating Costs: \$476 per vehicle hour

## Inter-City Rail

- Transit between metropolitan areas such as Detroit-Chicago.
- May implement high-speed (> 100 mph) rail technology.
- Not included in the Regional Transit plan.
- Should be a part of a state or Great Lakes Region transit plan.

## Regional Project Transit

► Modes: ART, BRT & LRT

► Corridors: selected via a variety of factors:

- Potential ridership
- Physical layout of the street
- Potential for economic/jobs benefits for the corridor
- Corridors will move to a higher level of service *if and only if* ridership warrants the improvement

# 2012 - Detroit LRT Service

## LRT

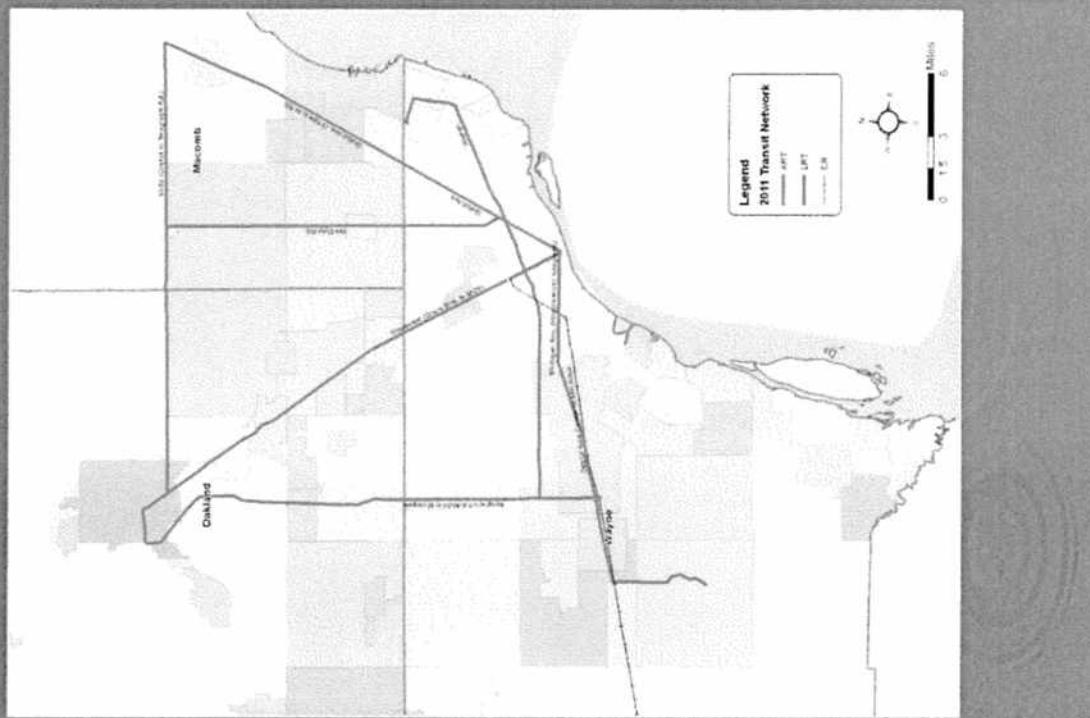
- Woodward (Phase 1): Jefferson to Grand Blvd.

## ART

- Gratiot: Woodward to M-59
- M59: Gratiot to Telegraph
- Michigan: Woodward to Metro Airport
- Telegraph: M-59 to Michigan
- Van Dyke: Gratiot to M-59
- Warren: 8 Mile to Telegraph
- Woodward: Grand Blvd. to M-59

## Commuter Rail

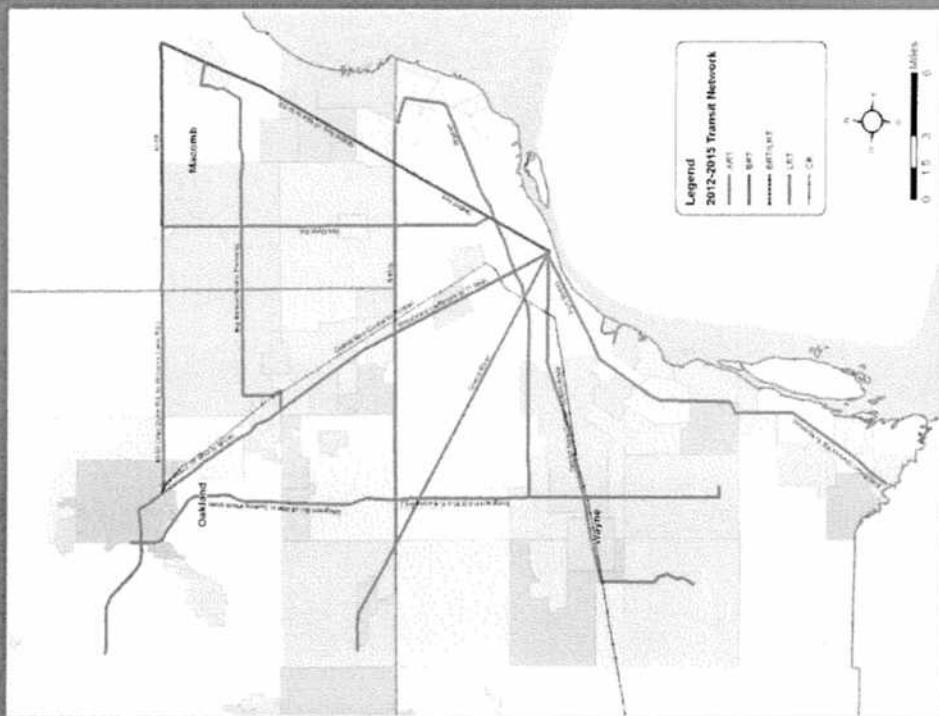
- Detroit to Ann Arbor with stops in Dearborn, North of Metro Airport and Ypsilanti.



## 2012-2015 Proposed Network

### Proposed Network Additions

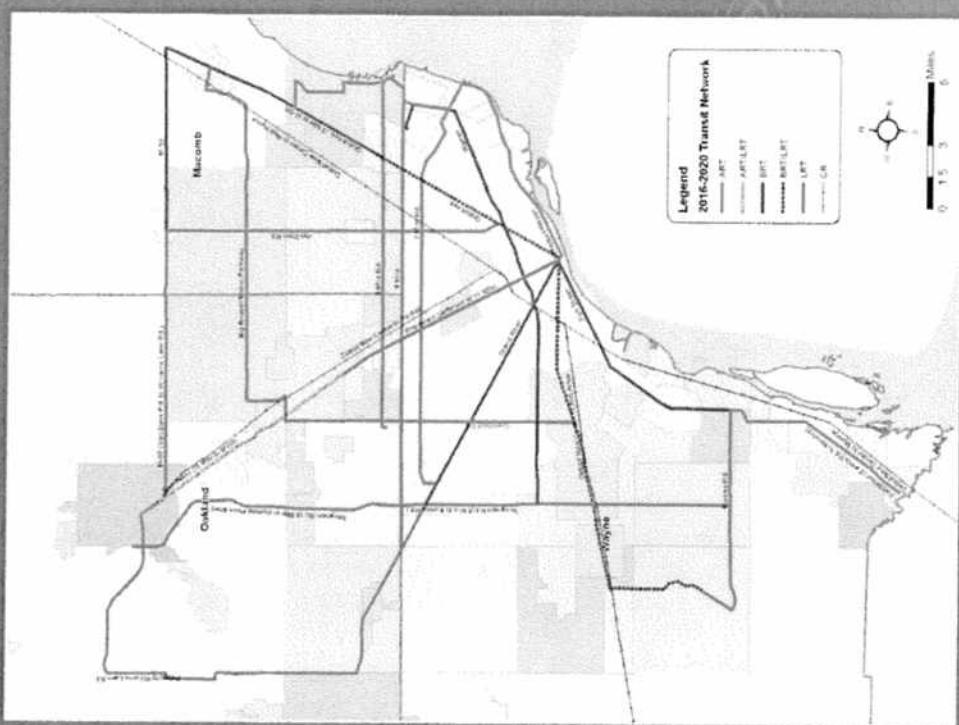
- LRT
  - Woodward (Phase 2)  
extended to 11 Mile
- BRT
  - Gratiot & M59 (Gratiot to Van Dyke)
- ART
  - 8 Mile
  - Big Beaver/Metro Parkway
  - Fort St.
  - Grand River
  - Jefferson
- Commuter Rail
  - Detroit to Pontiac with stops in Royal Oak and Birmingham



## 2015 – 2020 Proposed Network

### Proposed Network Additions

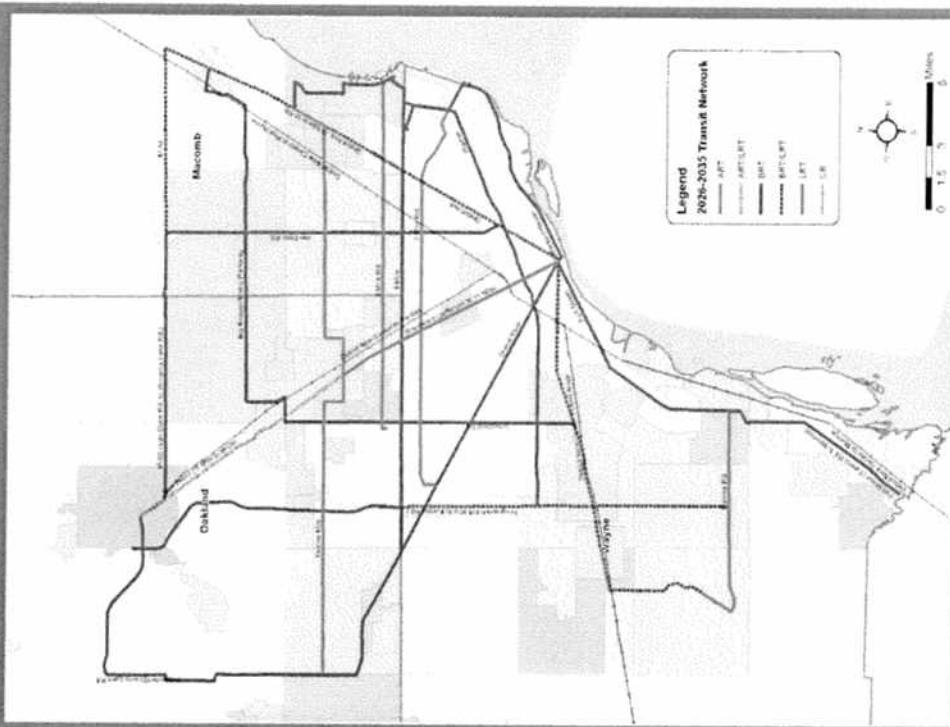
- BRT/LRT
  - Michigan
- BRT
  - Fort St.
  - Grand River
  - Warren
- ART/LRT
  - Woodward extended to M-59
- ART
  - Several more corridors added
- Commuter Rail
  - Detroit – Monroe
  - Detroit – Port Huron



## 2025 – 2035 Proposed Network

### Proposed Network Additions

- BRT/LRT
  - Telegraph: 8 Mile – Eureka Rd.
  - Fort St: Eureka Rd. – Monroe
  - Greenfield Rd.
  - Grand River: Telegraph – Haggerty
  - Haggerty/Williams Lake Rd.
  - Jefferson/Harper
- BRT
  -



## Economic Development

- Regional Multi-Modal Transit can make ‘good economic development plans’ become ‘great economic development plans’
- Maximum benefit with light rail, but strong impact with both BRT or ART
- Significant direct economic development benefits within  $\frac{1}{4}$  -  $\frac{1}{2}$  mile of station areas (TOD)
- A regional transit system is a key factor in corporate location decisions
- **APTA** states that \$6 in private investment results from every \$1 of investment in mass rapid transit

- Regional Economic Development Deserts
- **Conducted research on 4 representative corridors studied in different types of development environments.**

- Woodward
- Telegraph
- 8 Mile
- M-59

## Regional Economic Development Districts

- **Economic and Fiscal impacts of the 4 proposed corridors**
  - 30,000 new jobs (direct and indirect)
  - \$1.4 billion in payroll
  - 10,800 new housing units created
  - \$1.9 billion in new development value created
  - \$224 million in annual retail sales
- **Fiscal Impact – effect of economic impact on tax revenue**
  - \$87 million in annual tax revenue to State and local jurisdictions

## Upcoming

- The RTCC BOD approved the plan with a unanimous vote of support on December 8, 2008

Regional Transit  
by June 30, 2009

- Regional Transit Authority
- Funding Plan